

# The karyotypic characterisation of the Large Horseshoe Bat, *Rhinolophus ferrumequinum* (Schreber, 1774) (Chiroptera: Rhinolophidae) from Iran

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**Abstract.** The diploid number of chromosomes of the karyotype of the Large Horseshoe Bat, *Rhinolophus ferrumequinum* from West Azerbaijan, Iran, is  $2n=58$ , the fundamental number of chromosomes  $NF=62$ , and the number of chromosomal arms  $NFa=58$ . The Iranian karyotype thus shows similarity to different populations in neighbouring countries as regards the diploid chromosome number, but it is quite different in the fundamental chromosome number and the number of autosomal arms.

**Kurzfassung.** Bei der Großen Hufeisennase, *Rhinolophus ferrumequinum*, beträgt in West-Aserbaidschan, Iran, die diploide Anzahl der Chromosomen  $2n=58$ , die Grundzahl der Chromosomen  $NF=62$  und die Anzahl der Chromosomenarme  $NFa=58$ . Die diploide Anzahl der Chromosomen des iranischen Karyotyps ist damit derjenigen in verschiedenen Populationen in Nachbarländern sehr ähnlich, doch zeigen sich in der Grundzahl der Chromosomen und der Zahl der autosomalen Arme erhebliche Unterschiede.

**Key words.** Chromosomes, karyology, *Rhinolophus ferrumequinum*, Chiroptera, Iran.

## Introduction

The Large Horseshoe Bat, *Rhinolophus ferrumequinum* (Schreber, 1774), ranges widely across the South Palaearctic: North Africa and temperate Eurasia (Europe, the Middle East, the Caucasus, Turkestan) and through the Himalayas to Kashmir, China, Korea and Japan (HORÁČEK et al. 2000). In Iran, it is one of seven species of the genus *Rhinolophus* Lacépède, 1799 (HORÁČEK et al. 2000), and it is represented by the subspecies *irani* Cheesman, 1921 (terra typica: Shiraz, Iran) (DEBLASE 1980). Since a morphometric clinal trend has been shown to exist in this species, the status of *irani* and of some of the other forms is uncertain (*vide* HORÁČEK et al. 2000).

The karyology of *R. ferrumequinum* has been recorded from several countries in Europe, Africa and Asia, but no studies have yet been carried out in Iran. The aim of the present study was to report the chromosome numbers and karyotype of *R. ferrumequinum* samples from West Azerbaijan (Iran) and to compare the data obtained with those known from other populations in the Palaearctic Region, thereby helping to characterise the populations from this part of its distribution range.

## Material and methods

Four adult Large Horseshoe Bats, two females and two males, were caught with hand nets in Sakholan Cave near Sakholan Village (36°39'N, 45°56'E) in the West Azerbaijan Province of